

REMARKS

Reconsideration of the present application and withdrawal of the rejection of claims 1-20 is respectfully requested. Applicants have attempted to address every objection and ground for rejection in the Office Action dated June 28, 2005, and believe the application is now in condition for allowance.

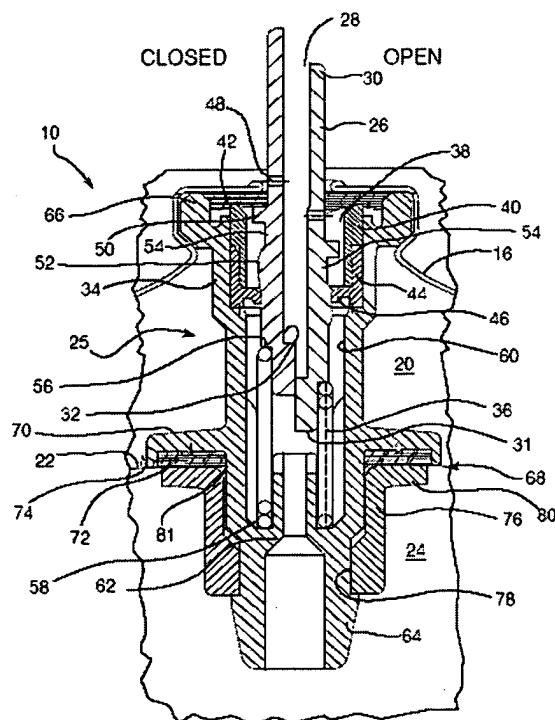
Claims 1-6, 9 stand rejected under 35 U.S.C. §102 as being anticipated by Marraffino (U.S. Patent No. 3,610,481). Additionally, dependent claims 7 and 8 stand rejected under 35 U.S.C. §103 as obvious over Marraffino in view of Stody, U.S. Patent No. 4,431,119. To more clearly describe the present invention, claim 1 has been amended to recite, among other things, “the flow of fluid out the outlet of the fuel cell is solely from said separate fuel container.”

As seen below in FIG. 1, the present fuel cell 10 having a fuel metering valve 25 includes a housing 12 and a main valve stem 26. The main valve stem 26 is disposed in operational relationship to an open end of the housing 16, and reciprocates relative to the housing 12 between an open and closed position. In the open position, the stem 26 is retracted, while in the closed position, the stem is extended.

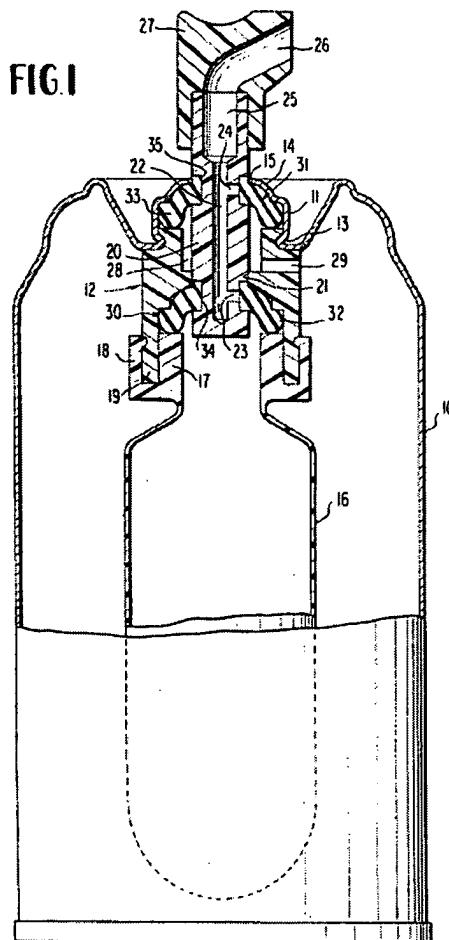
A fuel metering chamber 38 is associated with and disposed near the main valve stem 26. When the valve stem 26 is in the closed position, fuel can travel into and occupy the chamber 38, but is sealed off from the valve stem. Then, when the stem 26 is

opened, the chamber 38 is configured to deliver a measured amount of fuel through an inlet 48 into the stem 26 and out the outlet 28 of the fuel cell 10. Further introduction of fuel is prevented because the chamber 38 is sealed from the fuel by lip 46. In this configuration, a specific amount or “dose” of fuel (which is the fuel that occupies the chamber) is delivered out of the fuel cell 10. The housing 12 includes a separate fuel container 22. An end of the valve body is located within the separate fuel container 22 so that the fuel that is delivered out the outlet 28 of the fuel cell 10 is solely from the separate fuel container.

FIG. 1

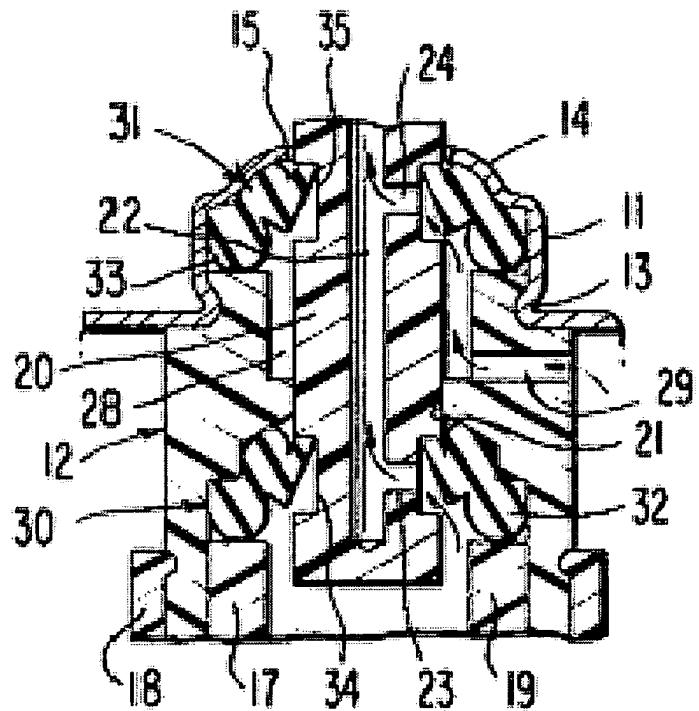


In contrast, Maraffino discloses a dispenser that dispenses multiple fluids simultaneously, and which delivers an arbitrary amount of fluid depending on the user's choice. As shown in FIGS. 1 and 4, Marroffino has a valve stem 20 mounted for reciprocation within a bearing of the valve head 12. The valve stem 20 has radial ports 23, 24 for introduction of fluid and a mixing chamber 25 for mixing the fluids. The flow pattern for the primary fluid into the mixing chamber 25 is through port 29, chamber 28, port 24 and valve stem bore 22.



The corresponding flow passage for secondary fluid in the container 16 is through the port 23 and the bore 22 to the chamber 25. When the user depresses the button 27 and shifts the valve stem 20 downwardly, the resilient seals 30 and 31 deform away from the ports to open them simultaneously (See FIG. 4 below). When the button 27 is released, the valve elements 30 and 31 will return the valve stem 20 to the non-dispensing position and the flow path of both fluids will be shut off (See FIG. 1 above).

FIG. 4



Thus, Marraffino does not disclose or even suggest the feature of “a separate fuel container...wherein the flow of fluid out the outlet of the fuel cell is solely from said separate fuel container,” as in amended claim 1. In Marraffino, the fluid is from both within the housing (primary fluid) and within the separate container (secondary fluid), not solely from the separate container.

Additionally, the amount of fluid dispensed from the outlet of Marraffino is not a measured amount. In Marraffino, as long as the user is depressing the button, both fluids are permitted to exit the outlet. In contrast, in the present fuel metering valve 25, only a measured amount of fuel is dispensed through the outlet. As explained, *supra*, the lip 46 prevents the further introduction of fuel into the chamber body 40 so that only the fuel contained in the chamber body (at the time the valve stem 26 is opened) is permitted to exit the outlet. This distinction is further expressed in new claim 21. For at least these reasons, Applicants submit that claim 1, and the claims that depend therefrom are allowable over the references.

Further, claims 10-18 stand rejected under 35 U.S.C. §103 as being obvious over Marraffino in view of Tsutsui, U.S. Patent No. 6,202,900. Independent claim 15 has been amended to recite, in part, “wherein said housing includes a separate fuel container, wherein the flow of fluid out the outlet of the fuel cell is solely from said separate fuel container.” Applicants traverse the rejection of claims 10-18 for the same reasons as given

above with respect to claim 1. Specifically, neither Marraffino nor Tsutsui disclose a separate fuel container, where the flow of fluid out the outlet is solely from the separate fuel container.

The Tsutsui reference is merely cited by the Examiner for disclosing a valve stem 13, a valve body 12, and a metering chamber 21 which are refillable when the valve stem is retracted past the open position. However, the Tsutsui reference does not remedy the deficiencies of the Marraffino reference. For at least these reasons, Applicants submit that claims 10-18 are allowable over the references.

Further still, claims 19 and 20 stand rejected under 35 U.S.C. §103 as obvious over Marraffino in view of Nikolich, U.S. Patent No. 4,483,474. Claim 19 was amended to recite, in part, “said housing includes a separate fuel container, wherein the flow of fluid out the outlet of the fuel cell is solely from said separate fuel container.” Neither the Marraffino reference nor the Nikolich reference discloses or suggests this feature.

The Nikolich reference is cited by the Examiner for disclosing the use of a fuel cell having a fuel metering valve with a combustion tool. However, Nikolich does not remedy the deficiencies of Marraffino. That is, Nikolich does not disclose a housing that “includes a separate fuel container, wherein the flow of fluid out the outlet of the fuel cell is solely from said separate fuel container,” as in amended claim 19. For this reason, Applicant submits that claims 19 and 20 are allowable over the references.

Appl. No. 10/827,551
Amdt. dated December 27, 2005
Reply to Office Action of June 28, 2005

The above amendments to the claims are believed to place the present application in condition for allowance. Allowance of the rejected claims is respectfully requested. Should the Examiner discover there are any remaining issues which may be resolved by a telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below, or Lisa Soltis, main attorney of record, at (847) 657-7980. All correspondence should be directed to Lisa Soltis.

Respectfully submitted,

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